Summit® WM3600 Wireless LAN Controller Installation Guide

extreme
networks

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1 Introduction

The Extreme Networks® Summit® WM3600 wireless LAN controller is a high-performance member of the Extreme Networks wireless controller family. The Summit WM3600 wireless LAN controller provides centralized Wireless LAN (WLAN) configuration and management by coalescing a network "intelligence" previously spread across physically distributed access points. The Summit WM3600 wireless LAN controller is the WLAN's single point of contact, thus reducing wireless networking complexity by moving management out of the ceiling and into the wiring closet. In addition, through the use of a Virtual AP architecture, the Summit WM3600 wireless LAN controller lets you create multiple WLANs without changing or adding to the existing wired network infrastructure.

This document is written for the network device installer.

Package Contents

Inspect the package contents and report any missing or damaged items to your sales representative. The package should contain the following:

● Summit WM3600 wireless LAN controller with Rack Brackets installed
● Console Cable
● *Summit WM3600 Wireless LAN Controller Installation Guide* (this document)
● China RoHS compliance document

Document Conventions

The following graphical alerts are used in this document to indicate notable situations:

NOTE

Tips, hints, or special requirements that you should take note of.

CAUTION

Care is required. Disregarding a caution can result in data loss or equipment malfunction.

WARNING!

Indicates a condition or procedure that could result in personal injury or equipment damage.

Warnings

- Read all installation instructions and site survey reports, and verify correct equipment installation before connecting the system to its power source.
- Remove jewelry and watches before installing this equipment.
- Install the equipment in a rack with adequate dimensions and weight allowances.
- Verify the rack is anchored and cannot tip over or break away from its mountings.
- Verify the unit is grounded before connecting it to the power source.
- Verify any device connected to this unit is properly wired and grounded.
- Connect all power cords to a properly wired and grounded electrical circuit.
- Verify the electrical circuits have appropriate overload protection.
- Attach only approved power cords to the device.
- Extreme Networks strongly recommends the use of an Uninterruptible Power Supply (UPS) that supports the Summit WM3600 wireless LAN controller power rating. Not using a UPS can result in data loss or equipment damage due to a power surge or power failure.
- Verify that the power connector and socket are accessible at all times during the operation of the equipment.
- Do not work with power circuits in dimly lit spaces.
- Do not install this equipment or work with its power circuits during thunderstorms or other weather conditions that could cause a power surge.
- Verify there is adequate ventilation around the device, and ambient temperatures meet equipment operation specifications.

Site Preparation

- Consult your site survey and network analysis reports to determine specific equipment placement, port capacity, power drops, and so on.
- Assign installation responsibility to the appropriate personnel.
- Identify where all installed components are located.
- Verify appropriate rack mounting requirements.
- Provide a sufficient number of power drops for your equipment.
- Ensure adequate, dust-free ventilation to all installed equipment.
- Identify and prepare Ethernet and console port connections.
- Verify that cable lengths are within the maximum allowable distances for optimal signal transmission.
- Verify that the Summit WM3600 wireless LAN controller is powered through an Uninterruptible Power Supply (UPS).

2 **Specifications**

Physical Specifications

Width	440mm (17.32 in)
Height	44.45mm (1.75 in)
Depth	390.8mm (15.38 in)
Weight	6.35 Kg (14.0 lbs)
Operating Temperature	0°C - 40°C
Operating Humidity	5% - 85% RH, non-condensing
Operating Altitude	3 km (10000 ft)

Power Cord Specifications

A power cord is not supplied with the controller. Use only a correctly rated power cord certified (as appropriate) for the country of operation.

Power Protection

- **If possible, use a circuit dedicated to data processing equipment.** Commercial electrical contractors are familiar with wiring for data processing equipment and can help with the load balancing of these circuits.
- **Install surge protection.** Be sure to use a surge protection device between the electricity source and the Summit WM3600 wireless LAN controller.
- **Install an Uninterruptible Power Supply (UPS)**. A UPS provides continuous power during a power outage. Some UPS devices have integral surge protection. UPS equipment requires periodic maintenance to ensure reliability. A UPS of the proper capacity for the data processing equipment must be purchased.

③ LED Codes

The Summit WM3600 wireless LAN controller has four vertically-stacked LEDs on its front panel. Each of the controller's Gigabit Ethernet ports have two status LEDs. These LEDs display two colors (green & amber), and three lit states (solid, blinking, and off). The following tables decode the combinations of LED colors and states for the System Status LEDs and the Gigabit Ethernet LEDs.

System Status LEDs
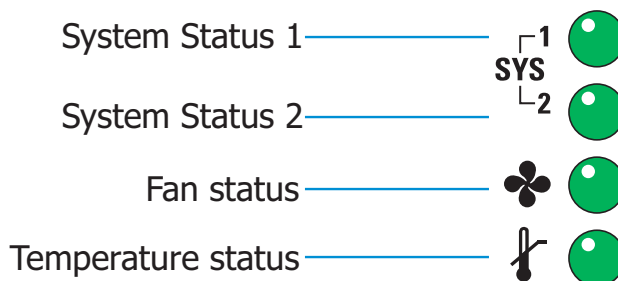
Start Up / POST (Primary System or Redundant System)

System Status 1 LED	System Status 2 LED	Event
Off	Off	Power off
Green Blinking	Green Blinking	Power On Self Test (POST) running
Green Solid	Green Blinking	POST succeeded (Operating System Loading)
Green Solid	Off	POST succeeded (Normal Operation)
Amber Blinking	Off	POST Failure
Alternating Green Blinking & Amber Blinking	Alternating Green Blinking & Amber Blinking	Boot Up Error: Device has an invalid checksum

NOTE

During controller start up, the Temperature status LED will be lit Solid Amber. This is normal behavior and does not indicate an error. At the completion of start up the Temperature Status LED will switch to Solid Green.

Controller Status (Primary System)

System Status 1 LED	System Status 2 LED	Event
Off	Off	Power off
Green Solid	Off	No Redundancy Feature Enabled
Green Solid	Green Solid	Redundancy Feature Enabled Actively Adopting Access Points
Green Solid	Amber Blinking	No License to adopt Access Points or No Country Code configured on the controller or License and Country Code configured, but no APs adopted

Controller Status (Redundant System)

System Status 1 LED	System Status 2 LED	Event
Off	Off	Power off
Green Solid	Off	No Redundancy Feature Enabled
Green Blinking	Green Solid	Redundant System failed over and adopting ports
Green Blinking	Alternating Green Blinking & Amber Blinking	Redundant System not failed over.

System Status 1 LED	System Status 2 LED	Event
Green Solid	Amber Blinking	No License to adopt Access Points or No Country Code configured on the controller or License and Country Code configured, but no APs adopted

Fan LED

Fan LED	Event
Off	System Off / POST Start
Green Blinking	POST in Process
Green Solid	All System Fans Normal Operation
Amber Solid	Redundant Cooling Failure System Operational
Amber Blinking	System Cooling Failure *System will be held in reset until the issue is resolved*

Temperature Status LED

Temperature LED	Event
Off	System Off
Green Solid	Ambient Inlet Temperature is within specified operating limit
Amber Solid	Ambient Inlet Temperature is near the maximum operating temperature During controller start up this LED will be lit Solid Amber. This is normal behavior and does not indicate an error.
Amber Blinking	Ambient Inlet Temperature is above the maximum specified operating temperature *System will be held in reset until the issue is resolved*

RJ-45 Gigabit Ethernet LEDs
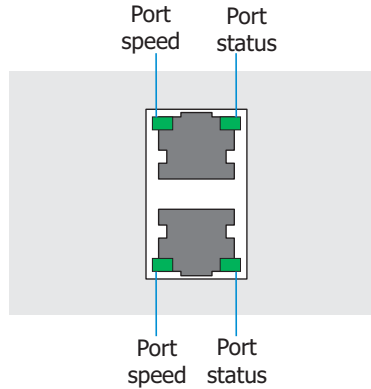
RJ-45 Port Speed LED

Port Speed LED	Event
Off	10 Mbps
Green Solid	100 Mbps
Amber Solid	1000 Mbps

RJ-45 Port Status LED

Port Status LED	Event
Off	No Link or Administratively shut down
Green Solid	Link present
Green Blinking	Activity: Transmit and Receive

SFP Gigabit Ethernet LEDs
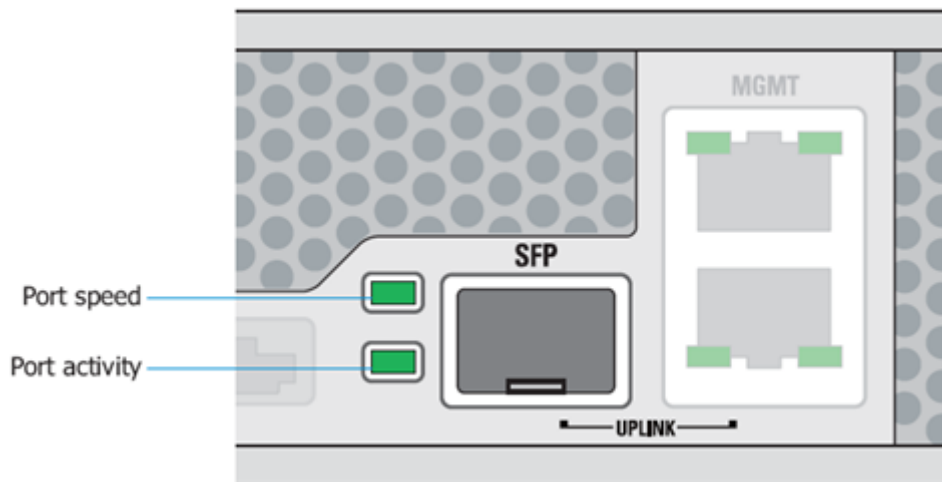
SFP Port Speed LED

Port Speed LED	Event
Amber Solid	1000 Mbps

SFP Port Activity LED

Port Activity LED	Event
Off	No Link or Administratively shut down
Green Blinking	Link present / Operational

Out of Band Management Port LEDs
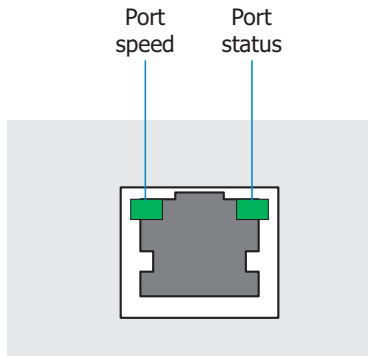
Out of Band Management Port Speed LED

Port Speed LED	Event
Off	10 Mbps
Green Solid	100 Mbps

Out of Band Management Port Status LED

Port Status LED	Event
Off	No Link
Green Solid	Link present
Green Blinking	Activity: Transmit and Receive

4 **Hardware Setup**

Cabling Information

The Summit WM3600 wireless LAN controller has nine RJ-45 Gigabit Ethernet ports, one Gigabit SFP (fiber) port, one Out-of-band Fast Ethernet management port and one Console connector. The following diagram shows each of those ports and the cables or devices attached to them. The sections that follow describe detailed connection and cabling information for each port. For software configuration, please see the *Summit WM3000 Series Controller System Reference Guide* available from the Extreme Networks website.
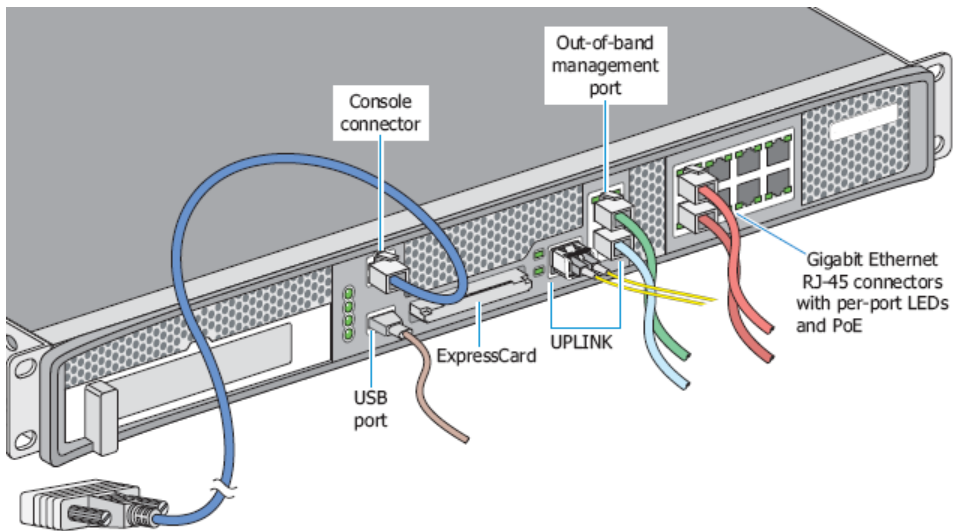
Gigabit Ethernet on the Summit WM3600 wireless LAN controller

The Summit WM3600 wireless LAN controller has nine RJ-45 Gigabit Ethernet ports and one Gigabit SFP (fiber optic) port. Using the RJ-45 ports requires connecting a Category-6 Ethernet cable to the port. To use the Gigabit SFP port, first install an SFP Module.
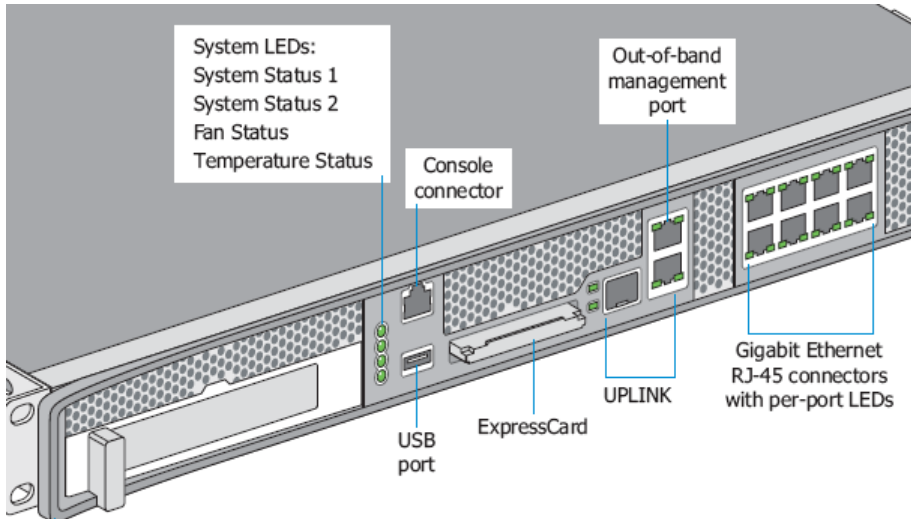
Installing Gigabit Ethernet SFPs

1 Open the bail on the transceiver.

Open bail to insert or remove
SFP transceiver
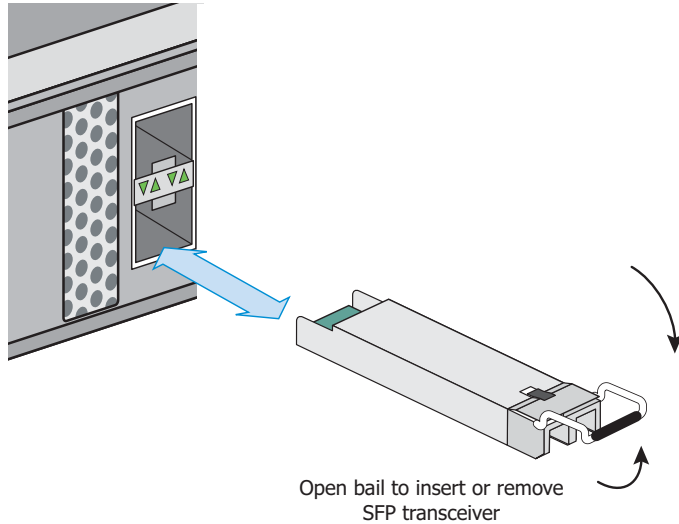
2 Insert the SFP transceiver into the corresponding port on the controller.

3 Once the SFP transceivers are properly seated in their ports, close the bails to lock the transceivers in place.
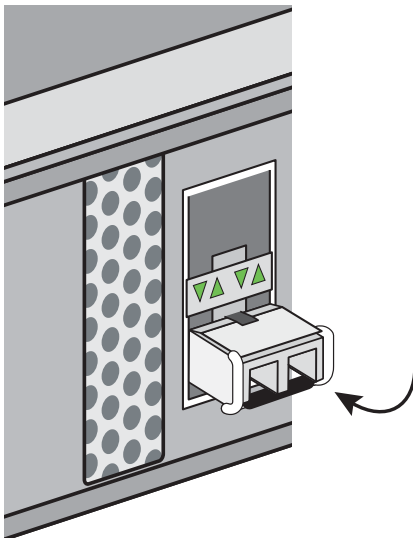
4 Insert the fiber optic cables into the installed transceivers
.
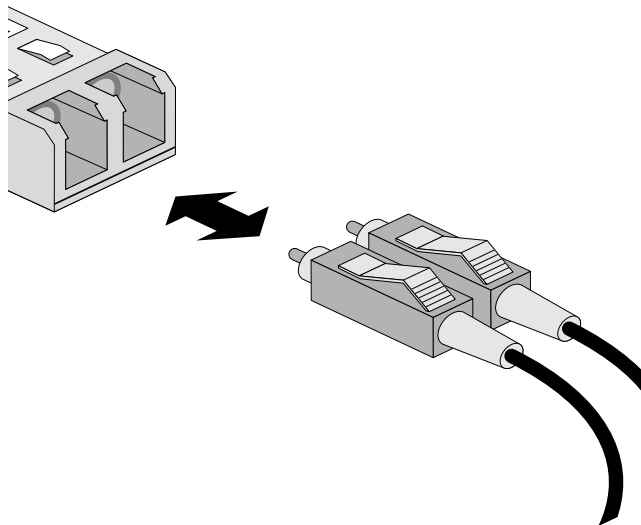
Connecting USB Devices

The Summit WM3600 wireless LAN controller contains one USB port for connecting USB flash storage devices to the controller. The controller can use the USB flash storage device for file transfers and firmware updates. Follow the setup instructions below to connect the devices to the controller and then access those devices through the Web UI or Command Line Interface.
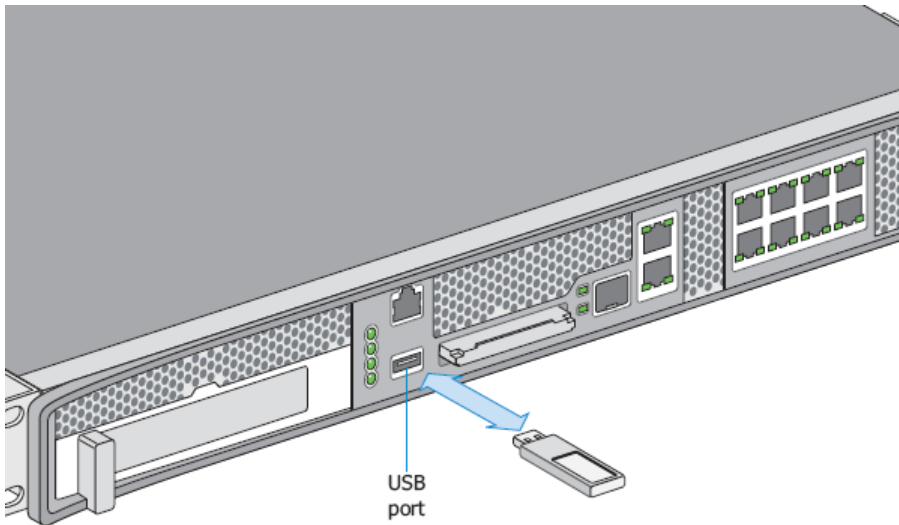
1 Connect the USB flash drive to the USB .

2 Wait a few seconds for the drive to be recognized by the controller.

3 Follow the instructions in the *Summit WM3000 Series Controller System Reference Guide* or *Summit WM3000 Series Controller CLI Reference Guide* for more information on accessing USB storage devices from the controller for file transfers or firmware updates.

NOTE

The controller supports USB flash devices formatted with FAT or VFAT (FAT32) filesystems only. If your flash storage device is formatted with another filesystem you will need to format the device before it can be used in the system.

Rack Mount Instructions

To install the Summit WM3600 wireless LAN controller in a rack:

1 The rack mounting brackets are installed at the factory. No additional steps are needed.

2 Attach the brackets to the rack using screws appropriate for your rack's mounting holes.
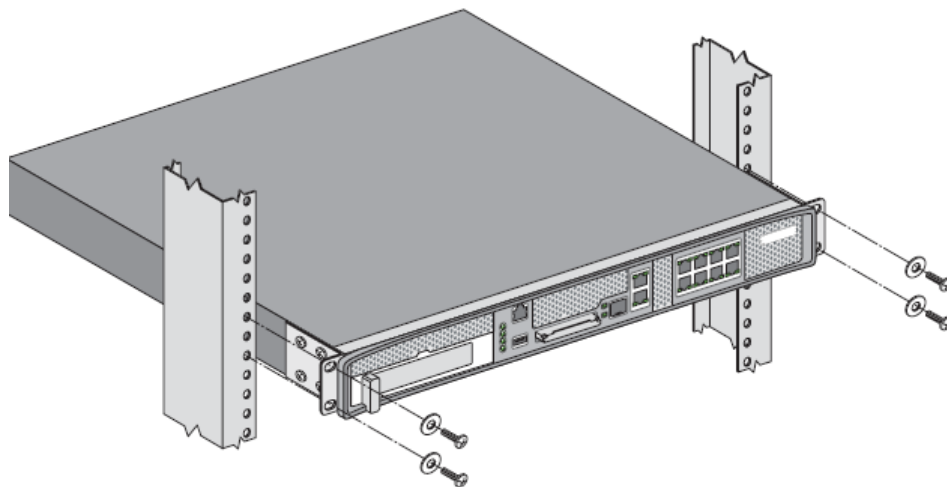
Summit WM3600 wireless LAN controller Console Port Setup

To add the Summit WM3600 wireless LAN controller to the network and prepare it for initial configuration:

1   Using the supplied console cable (pictured below), connect the Summit WM3600 wireless LAN controller serial port to an RS-232 (DB-9) serial port on a separate computer (the "configuration computer").
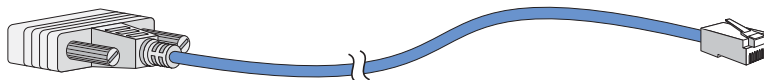
The pinout for the RJ-45 to DB9 cable is shown in the following table.

RJ-45	1	2	3	4,5	6	7	8
DB9	8	6	2	5	3	4	7

2   On the configuration computer, configure a terminal emulation application (such as **HyperTerminal**) as follows:

Terminal Type	VT-100
Port	COM port
Terminal Settings	19200bps transfer rate 8 data bits no parity 1 stop bit no flow control no hardware compression

Supplying Power to the Summit WM3600 wireless LAN controller
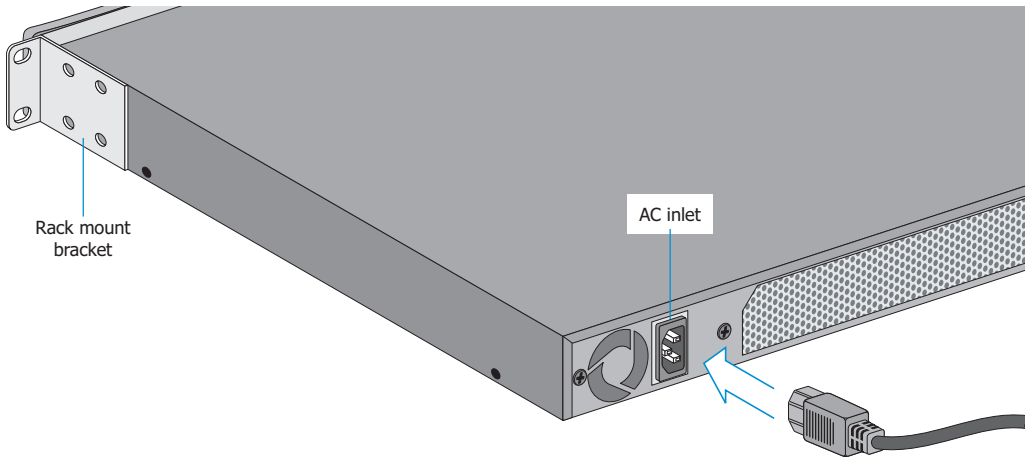
1 Plug an approved AC power cord into the power connector at the back of the Summit WM3600 wireless LAN controller.

2 Plug the cord into a standard AC outlet with a voltage range of 100 to 240 VAC.

WARNING!

An improper shutdown can render the Summit WM3600 wireless LAN controller inoperable such that it could require service by Extreme Networks Support. Do not remove AC power without first following the shutdown procedure. An abrupt loss of power can corrupt the information stored on the device.

Verifying the Installation

View the LEDs on the front panel of the Summit WM3600 wireless LAN controller to ensure the device is functioning properly. The normal LED pattern follows this path:

● During the Power On Self Test (POST), the System 1 and System 2 LEDs both blink green.

● If the POST test fails, the System 1 LED will blink amber. If the POST test succeeds, the System 1 LED will be lit solid green.

● As the software is initialized, the System 2 LED will blink green.

● After the software has finished initializing, the System 1 LED will be lit solid green and the bottom System 2 LED will be off. The Summit WM3600 wireless LAN controller is ready to be configured, as described in the *Summit WM3000 Series Controller System Reference Guide*.

Other LED codes indicate the presence (or absence) of different standby states, or errors. A guide to the Summit WM3600 wireless LAN controller LEDs codes is provided in *Chapter 3, LED Codes*.

5 Basic Configuration

This section describes how to set a minimal set of controller configuration parameters in order to launch the controller's Web UI, login, set the required controller country code and other basic settings to ensure the controller is optimally deployed.

Web UI Requirements

The controller Web UI is accessed using Internet Explorer version 5.5 (or later) and SUN JRE (*Java Runtime Environment*) 1.5 (or later). Refer to the Sun Microsystems Web site for information on downloading JRE.

NOTE

To successfully access the controller Web UI through a firewall, UDP port 161 must be open in order for the controller's SNMP backend to function.

To prepare Internet Explorer to run the Web UI:

1   Open Internet Explorer's *Tools > Internet Options* panel and select the *Advanced* tab.
2   Uncheck the following checkboxes:
   ● Use HTTP 1.1
   ● Java console enabled (requires restart)
   ● Java logging enabled
   ● JIT compiler for virtual enabled (requires restart).

Accessing the Summit WM Controller for the first time

You can access the Summit WM Controller using a laptop computer with a Web browser.

To access the controller using a web-enabled laptop:

1 Connect the controller's management port to a web-enabled laptop computer using a cross-over RJ 45 Ethernet cable.

NOTE

The default IP address of the controller's management port is 10.1.1.100

2 Launch your web browser.

In the address bar, type http://10.1.1.100. The Summit WM GUI login screen is displayed.

3 Enter the Username *admin*, and Password *admin123*. Both are case-sensitive. Click the *Login* button.

Once the Web UI is accessed, the controller main menu item displays a configuration tab with high-level controller information. Click the *Show Dashboard* button to display an overall indicator of controller health. Once the controller is fully configured, the dashboard is the central display for the user to view the version of firmware running on the controller, quickly assess the last 5 alarms generated by the controller, view the status of the controller's Ethernet connections and view controller CPU and memory utilization statistics.

Defining Basic Controller Settings

When initially logging into the system, the controller requests that you enter the correct country code for your region. If a country code is not configured, a warning message displays stating that an incorrect country setting will lead to the illegal use of the controller. Each country has its own regulatory restrictions concerning electromagnetic emissions (channel range) and the maximum RF signal strength transmitted. To ensure compliance with national and local laws, be sure to set the *Country* correctly. In addition to the country, you need to initially set several other controller settings to ensure it can be optimally deployed.

To define basic controller settings using the controller's GUI:

1 Select *Controller* from the main menu tree.

2 Click the *Configuration* tab.

3 Refer the *System* field to define the following basic controller settings:

System Name	Displays the designated system name. Provide a system name serving as a reminder of the user base the controller supports (engineering, retail, etc.).
Location	The *Location* parameter serves as a reminder of where the controller can be found. Define the System Name as a specific identifier of the controller's location. Use the System Name and Location parameters together to optionally define the controller name by the radio coverage type it supports and physical location. For example, "second floor engineering."
Contact	Displays a *Contact* value for system administration and troubleshooting. This name should be the network administrator responsible for controller operations.
Uptime	Displays the current operational time for the device name defined within the System Name field. Uptime is the cumulative time since the controller was last rebooted or lost power.
Firmware	Displays the current firmware version running on the controller. This version should be periodically compared to the most recent version available on the Extreme Networks Web site, as versions with increased functionality are periodically released.
AP Licenses	Displays the number of Access Point licenses currently available for the controller. This value represents the maximum number of Access Points the controller is licensed to adopt.
Date (MM/DD/YYYY)	Displays the day, month and year currently used with the controller.
Time (HH:MM:SS)	Displays the time of day used by the controller.
Time Zone	Use the drop-down menu to specify the time zone used with the controller. Adjusting the time zone will in turn, cause an adjustment to the time displayed.
Country	Use the *Country* drop-down menu to specify the correct country of operation. Selecting the country incorrectly could render your controller as operating illegally.

Once the above basic settings have been defined or reviewed, you can set a more sophisticated controller configuration in respect to your unique deployment requirements. Go to http://www.extremenetworks.com/go/documentation to access the *Summit WM3000 Series Controller System Reference Guide*.

To login into the controller using the CLI:

Access the CLI by running a terminal emulation program on a computer connected to the serial port on the front of the controller.

```
Login: cli

Username: admin

Password: admin123
```

Once you have logged in and accessed the controller's CLI, you can set a more sophisticated controller configuration in respect to your unique deployment requirements. Go to http://www.extremenetworks.com/go/documentation to access the *Summit WM3000 Series Controller CLI Reference Guide*.

Summit WM3600 Wireless LAN Controller Installation Guide

6 Regulatory Information

This regulatory section applies to the Summit WM3600 wireless LAN controller.

All Extreme Networks devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Any changes or modifications to Extreme Networks equipment, not expressly approved by Extreme Networks, could void the user's authority to operate the equipment.

Country Selection

Select only the country in which you are using the device. Any other selection will make the operation of this device illegal.

Laser Devices - Gigabit Ethernet SFP Option

Complies with 21CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.

EN60825-1:1994+ A1:2002 +A2:2001

IEC60825-1:1993+A1:1997+A2:2001

The laser classification is marked on the device.

Class 1 Laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with US and international regulations:

CAUTION

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Radio Frequency Interference Requirements - FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Radio Frequency Interference Requirements - Canada

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada..

$C \in$ Marking and European Economic Area (EEA)

Statement of Compliance

Extreme Networks hereby declares that this device is in compliance with all the applicable Directives, 2004/108/EC, 2006/95/EC. A Declaration of Conformity may be obtained from http://www.extremenetworks.com/go/rfcertification.htm.

Japan (VCCI) - Voluntary Control Council for Interference

Class A ITE

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

⊠ **Waste Electrical and Electronic Equipment (WEEE)**

English: For EU Customers: All products at the end of their life must be returned to Extreme Networks for recycling. For information on how to return product, please go to: http://www.extremenetworks.com/go/eu-weee.

Čeština: Pro zákazníky z EU: Všechny produkty je nutné po skončení jejich životnosti vrátit společnosti Symbol k recyklaci. Informace o způsobu vrácení produktu najdete na webové stránce: http://www.extremenetworks.com/go/eu-weee

Dansk: Til kunder i EU: Alle produkter skal returneres til Extreme Networks til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: http://www.extremenetworks.com/go/eu-weee.

Deutsch: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Extreme Networks zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter http://www.extremenetworks.com/go/eu-weee.

Eesti: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Extreme Networks'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.extremenetworks.com/go/eu-weee.

Español: Para clientes en la Unión Europea: todos los productos deberán entregarse a Extreme Networks al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: http://www.extremenetworks.com/go/eu-weee.

Ελληνικά: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Symbol για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση http://www.extremenetworks.com/go/eu-weee .

Français : Clients de l'Union Européenne : Tous les produits en fin de cycle de vie doivent être retournés à Extreme Networks pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : http://www.extremenetworks.com/go/eu-weee.

Italiano: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Extreme Networks al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web: http://www.extremenetworks.com/go/eu-weee.

Latviešu: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Symbol otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Symbol, lūdzu, skatiet: http://www.extremenetworks.com/go/eu-weee .

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti grąžinti utilizuoti į kompaniją „Symbol". Daugiau informacijos, kaip grąžinti gaminį, rasite: http://www.extremenetworks.com/go/eu-weee

Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Extreme Networks vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a http://www.extremenetworks.com/go/eu-weee weboldalra

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Symbol għar-riċiklaġġ. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: http://www.extremenetworks.com/go/eu-weee

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Extreme Networks te worden teruggezonden voor recycling. Raadpleeg http://www.extremenetworks.com/go/eu-weee voor meer informatie over het terugzenden van producten.

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji należy zwrócić do firmy Symbol w celu ich utylizacji. Informacje na temat zwrotu produktów znajdują się na stronie internetowej http://www.extremenetworks.com/go/eu-weee

Português: Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Extreme Networks para reciclagem. Para obter informações sobre como devolver o produto, visite: http://www.extremenetworks.com/go/eu-weee.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Extreme Networks za reciklažo. Za informacije o vraèilu izdelka obišèite: http://www.extremenetworks.com/go/eu-weee.

Slovenščina: Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Symbol na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: http://www.extremenetworks.com/go/eu-weee

Suomi: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Extreme Networks-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa http://www.extremenetworks.com/go/eu-weee.xtremenetworks.com/go/eu-weee.

7 Part Numbers and Support

The following table lists the part numbers of the Summit WM3600 Wireless LAN controller and available licenses.

Description	Part Number
Summit WM3600 Wireless LAN Controller	15714
16 AP license for Summit WM3600 Wireless LAN Controller	15715
64 AP license for Summit WM3600 Wireless LAN Controller	15719
RTLS license for Summit WM3600 Wireless LAN Controller	15716
Adv Security license for Summit WM3600 Wireless LAN Controller	15736

Customer Service

NOTE

Services can be purchased from Extreme Networks or through one of its channel partners. If you are an end-user who has purchased service through an Extreme Networks channel partner, please contact your partner first for support.

Extreme Networks Technical Assistance Centers (TAC) provide 24x7x365 worldwide coverage. These centers are the focal point of contact for post-sales technical and network-related questions or issues. TAC will create a Service Request (SR) number and manage all aspects of the SR until it is resolved. For a complete guide to customer support, see the *Technical Assistance Center User Guide* at:

http://www.extremenetworks.com/go/TACUserGuide

The Extreme Networks eSupport website provides the latest information on Extreme Networks products, including the latest Release Notes, troubleshooting, downloadable updates or patches as appropriate, and other useful information and resources. Directions for contacting the Extreme Networks Technical Assistance Centers are also available from the eSupport website at:

https://esupport.extremenetworks.com

Registration

If you have not already registered with Extreme Networks using a registration card supplied with your product, you can register on the Extreme Networks website at: http://www.extremenetworks.com/go/productregistration.

Documentation

Check for the latest versions of documentation on the Extreme Networks documentation website at:

http://www.extremenetworks.com/go/documentation

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